What is claimed is:

1. An articulated orthosis having a first and a second hinged parts, the orthosis having an inner and outer surfaces, and at least one joint for hinging the first and second part, the orthosis comprising:

   a tension element having a first anchor point coupled to the first hinged part and a second anchor point coupled to the second hinged parts, the tension element having at least one flat outer surface which is substantially co-planer to the inner surface of the orthosis adjacent to the tension element;

   a first and a second compression surfaces coupled to the first and second parts respectively;

   a compression element disposed between the compression surfaces;

   wherein the compression surfaces are located so as to transmit forces to the compression element as a result of angular motion between the first and second hinged parts, the forces being operable to compress the compression element.

2. An articulated orthosis as claimed claim 1, wherein the compression element comprises a first block of resilient material.

3. An articulated orthosis as claimed in 1 or 2, wherein said tension element has an overall bending stiffness in the range between 0.02 and 1.3 Nm.

4. An articulated orthosis as claimed in any preceding claim, wherein at an unloaded condition the angle between the first and second hinged parts is variable by the dimensions of the compression element.

5. An articulated orthosis as claimed in any preceding claim, wherein resistance to moment force applied to at least one of the hinged parts is variable by the modulus of elasticity of the compression element.

6. An articulated orthosis as claimed in any preceding claim, wherein the tension element has an adjustable effective length, for allowing relative angular adjustment of the hinged parts.

7. An articulated orthosis as claimed in any preceding claim, wherein at least one of the hinged parts has a plurality of retaining walls for forming a chamber to at least partially contain the compression element, and wherein the tension element defines a boundary of the chamber.

8. An articulated orthosis as claimed in claim 7 wherein at least one of said retaining walls is movable for changing the dimensions of the chamber.

9. An articulated orthosis as claimed in any preceding claim, wherein at least one of said compression surfaces is adjustable.

10. An articulated orthosis as claimed in any of claims 2-8, wherein the compression element further comprises a second block of resilient material having a higher modulus of elasticity than the modulus of elasticity of the first block, the second block disposed between at least a portion of the first and second hinged parts, so as to be compressed as result of angular motion therebetween, after compression has been applied to the first block.

11. An articulated orthosis as claimed in any of claims 7-9 wherein the compression element is freely disposed within the chamber.

12. An articulated orthosis as claimed in any preceding claim, wherein the tension element comprises anchor points transverse to the flat side.

13. An articulated orthosis as claimed in any preceding claim, wherein the compression surfaces are integral to at least one of the hinged parts.

14. An articulated orthosis as claimed in claim 1, wherein the compression element is selected from a list consisting of a spring, jell cell, pneumatic container, hydraulic cell, or a combination thereof.

15. An articulated orthosis as claimed in any preceding claim, wherein said tension element has an overall bending stiffness of between 0.08 and 0.9 Nm.

16. An articulated orthosis as claimed in any preceding claim, wherein said tension element has an overall bending stiffness of between 0.2 and 0.5 Nm.

17. An articulated orthosis as claimed in any preceding claim, wherein at least part of the tension element is integral to one of the hinged parts.

18. An articulated orthosis having a first and a second hinged parts, the orthosis having an inner and outer surfaces, and at least

one joint for hinging the first and second part, the orthosis comprising:

a first and a second compression surfaces coupled to the first and second parts respectively;

a plurality of retaining walls coupled to at least one of the hinged parts, the walls defining a chamber;

a compression element at least partially disposed within the chamber;

a tension element at least partially disposed within the chamber, the tension element comprises a first anchor point coupled to the first hinged part and a second anchor point coupled to the second hinged parts;

wherein the compression surfaces are located so as to transmit forces to the compression element as a result of angular motion between the first and second hinged parts, the forces being operable to compress the compression element; and,

wherein the tension element is disposed between the compression element and at least one of the chamber walls.

19. An articulated orthosis as claimed in claim 18, wherein the compression element comprises a first block of resilient material.

20. An articulated orthosis as claimed in claim 18 or 19, wherein the tension element is retained in place by forces applied by the compression element.

21. An articulated orthosis as claimed in any of claims 18-20, wherein the tension element comprises at least one support, which

interacts with the compression element to retain the compression element in place.

22. An articulated orthosis as claimed in any of claims 18 - 21, wherein at least one of said compression surfaces is adjustable.

23. An articulated orthosis as claimed in claim 18, wherein the compression element is selected from a list consisting of a spring, jell cell, pneumatic container, hydraulic cell, or a combination thereof.

24. An articulated orthosis as claimed in claim 18-23, wherein said tension element has an overall bending stiffness in the range between 0.02 and 1.3 Nm.

25. An articulated orthosis as claimed in claim 18-24, wherein said tension element has an overall bending stiffness in the range between 0.08 and 0.9 Nm.

26. An articulated orthosis as claimed in claim 18-25, wherein said tension element has an overall bending stiffness in the range between 0.2 and 0.5 Nm.